

Title (en)
Mini-proinsulin, its production and use.

Title (de)
Mini-Proinsulin, seine Herstellung und Verwendung.

Title (fr)
Mini-proinsuline et sa production et utilisation.

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Application
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Priority
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Abstract (en)
A mini-proinsulin in which the A and B chains are linked by the amino acid Arg in place of the C chain has insulin activity and is suitable for producing medicaments for the treatment of diabetes mellitus. It can also be converted straightforwardly with trypsin into an insulin derivative whose B chain is extended by Arg. The latter can be converted with carboxypeptidase B into insulin. However, it is also possible and advantageous to convert the mini-proinsulin directly into insulin in a one-pot process.

Abstract (de)
Ein Mini-Proinsulin, bei dem anstelle der C-Kette die Aminosäure Arg die A- und die B-Kette überbrückt, zeigt Insulinaktivität und eignet sich zur Herstellung von Arzneimitteln zur Behandlung des Diabetes mellitus. Es kann weiterhin einfach mit Trypsin in ein Insulinderivat überführt werden, dessen B-Kette um Arg verlängert ist. Dieses kann mit Carboxypeptidase B in Insulin umgewandelt werden. Vorteilhaft kann aber auch das Mini-Proinsulin direkt in einem Eintopfverfahren zu Insulin umgesetzt werden.

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A61K 37/26; **C07K 7/40**; **C12N 15/00**

IPC 8 full level
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Cited by
EP0600372A1; EP2502633A1; CN100362105C; US5866371A; US5227293A; US5491216A; US5698669A; US5663291A; US5728543A; US6001604A; US5466666A; US5358857A; WO2010016069A1; EP0776975A2; WO2012152439A1; US6531294B1; US7202059B2; US7638618B2; WO9516708A1; US6686177B1; US6221837B1; LT3328B

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